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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,337	05/15/2001	Hirofaka Uchiyama	8085	1086

27752 7590 06/09/2003

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EXAMINER

CHANNAVAJJALA, LAKSHMI SARADA

ART UNIT

PAPER NUMBER

1615

DATE MAILED: 06/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/855,337

Applicant(s)

UCHIYAMA ET AL.

Examiner

Lakshmi S Channavajjala

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Receipt of amendment B and declaration 3-19-03 is acknowledged.

Claims 1-58 are pending.

In response to the terminal disclaimer and the statement of common ownership filed on 3-19-03, examiner has withdrawn the following rejections:

1. Claims 1-37 and 42-52 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-17 of U.S. Patent No. 6,436,442.
2. Claims 1-37, 42-52 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-52 of copending Application No. 09/855,440.
3. Claims 1-37 and 42-52 are rejected under 35 U.S.C. 103(a) as being obvious over US 6,436,442 to Woo et al (Woo '442).
4. Claims 1-37 and 42-52 are rejected under 35 U.S.C. 103(a) as being obvious over 09/855,440 (PGPUB 2002000705) to Uchiyama et al (hereafter Uchiyama).
5. Claims 1-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,001,789 to Trinh et al (Trinh) in view of US 6,436,442 to Woo et al (Woo '442).

In response to applicants to amendment and remarks the following rejection has been withdrawn:

1. Claim 18 is rejected under 35 U.S.C. 112, first paragraph.
2. Claims 15 and 16 are rejected under 35 U.S.C. 112, first paragraph.

The following is a new rejection:

***Claim Rejections - 35 USC § 103***

Claims 1-58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon et al (US 5,500,137) and 5,942,217 to Woo et al (Woo) in view of Hodul et al (Tenside, Surfactants & Detergents, 1997) or Hodul and Dharmawardana et al (Langmuir, 1993).

Bacon teaches fabric-softening compositions containing a fabric-softening compound such as quaternary ammonium compounds, sorbitan esters of fatty alcohols, glycerol and polyglycerol esters etc., a perfume, nonionic surfactants such as ethoxylated fatty alcohols, sorbitan fatty alcohols polyethoxylene/polypropoxylene block polymers etc (col. 2, lines 1-29, in particular col.9, table 1 and table 2; and for nonionic surfactants col. 15-19). The nonionic surfactants of Bacon read on the instant surfactants of claim 1. The quaternary ammonium compounds of Bacon read on the incompatible surfactants of the instant claims. Bacon teaches that the composition can optionally contain cyclodextrin/perfume complex but not uncomplexed cyclodextrin or functionally available cyclodextrin (CD).

With respect to the claimed functionally available cyclodextrin, the term has been defined to include either not complexed (uncomplexed, free CD) or is complexed with materials weakly complexed with CD. Therefore, an uncomplexed CD meets the claim requirement.

Woo teaches uncomplexed cyclodextrins for absorbing malodors and for odor control on various surfaces including fabrics, skin, hair etc (col. 1, lines 30-45). The composition of Woo comprises an uncomplexed CD (cols. 6-8), cyclodextrin-compatible surfactants for providing a surface tension of 20 dynes/cm to 60 dynes/cm (cols. 8-11), antimicrobial agent, perfume, chelators, polymers for additional odor control benefits (col. 20, lines 44 through col. 21, lines 12) etc. Woo suggests that cyclodextrins have a unique ring shaped structure with a hollow

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interior cavity, which enables the CD molecules to absorb organic or inorganic molecules (such as odorous or malodorous molecules) to fit into the cavity. Woo teaches cyclodextrins in the amounts of 0.01% to 5%. Accordingly, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention to add uncomplexed cyclodextrin of Woo in the fabric softening composition of Bacon because Woo teaches cyclodextrin acts as an odor absorbing molecule for a broad spectrum of organic odoriferous compounds and restores/maintains the freshness of the fabrics. Further, Bacon suggests that the cavities of CD should remain essentially unfilled such that various compounds can be absorbed (col.6) when the composition is sprayed, so as to absorb malodor. Accordingly, using CD which is totally uncomplexed (free) or partially complexed, and still capable of binding the odor molecules (in other words functionally available to the extent that CD effectively absorbs odor molecules) would have been readily obvious for a skilled artisan.

Bacon and Woo does not teach the complexation constants or critical micelle concentrations of the composition as claimed. Hodul (abstract) studied the functional properties of inclusion complexes of nonionic surfactants such as polyethoxylated higher fatty alcohols and polyethoxylated phenols with cyclodextrin. Hodul studied properties such as wetting efficiency, foaming, detergent efficiency etc., and suggests that inclusion complexes of CD with polyethoxylated higher fatty alcohols increases the detergent efficiency to that of polyethoxylated alkyl phenols.

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Langmuir teaches a method of determining binding constants for cyclodextrin inclusion complexes for surfactants, which measures the change in surface tension caused by addition of cyclodextrin to aqueous solution of surfactants such as SDS, cetylpyridinium chloride and

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correlated with surfactant activity. Langmuir teaches surface tension is a function of the amount of CD and that the binding constants are calculated which related to the micelle formation (above or below critical micelle concentration). Langmuir does not teach the claimed surfactants.

However, it would have been obvious for one of an ordinary skill in the art at the time of the instant invention that CD and surfactant interaction play an important role in the detergency or surfactant efficiency of the compositions (Bacon and Woo) and therefore it would have been obvious for a skilled artisan to choose the amounts of surfactants (compatible or incompatible with CD) such that optimum binding between the two results in the desired detergency and surface tension of the surfactants employed. With respect to the pH claimed, the range 2 to 11 includes acidic, neutral and basic conditions. Absent criticality of the pH, it would have been obvious for one of an ordinary skill in the art to optimize the amount of pH of the composition of Bacon containing cyclodextrins of Woo.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lakshmi S Channavajjala whose telephone number is 703-308-2438. The examiner can normally be reached on 7.30 AM -4.00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K Page can be reached on 703-308-2927. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7924 for regular communications and 703-308-7924 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1235.



Lakshmi S Channavajjala  
Examiner  
Art Unit 1615  
June 3, 2003

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